

## ABSTRACT OF THE DISCLOSURE

A plurality of frequency-channels are provided, each composed of an OFDM multi-carrier. The OFDM sub-carrier of each channel is orthogonal to the sub-carrier of any other channel, so that two or more channels may be considered to transmit the same OFDM signal. Further, a sub-area that uses two or more channels is provided in each service area in which a base station is located at the center and assigned with a basic-frequency channel.